

James Clerk Maxwell. *The Scientific Letters and Papers of James Clerk Maxwell*. Volume 1: 1846–1862. Edited by **P. M. Harman**. xxviii + 748 pp., frontis., illus., figs., app., index. Cambridge/New York: Cambridge University Press, 1990. £135, \$210.

The Maxwell industry is notorious for its noncumulative nature. In all too much of the secondary literature, favorite passages in Maxwell's writings are echoed back and forth, with no gain in understanding. Some have suggested that the time has come to abandon Maxwell studies, in favor of more attention to the broader community of nineteenth-century physicists and natural philosophers. Maxwell, however, played a central role in that community, and to give up on him is a counsel of despair. We need, instead, to broaden and deepen our universe of discourse concerning Maxwell, his work, and his connections with the community. Peter Harman has taken a giant step in this direction with the publication of the first of three volumes whose "primary intention . . . is the reproduction of an accurate text of Maxwell's autograph manuscripts" (p. ix); the edition is to encompass "all Maxwell's scientific letters and substantive manuscript papers" (p. xxiii). Editorial choice in assembling this corpus has run along the following lines. The published papers already collected in *The Scientific Pa-*

pers of James Clerk Maxwell (1890; Dover, 1965) are not duplicated here, but published abstracts and short notices absent there are included. Maxwell's letters that are of relevance to his scientific thought and career are included—whether or not previously published—whereas some purely personal letters are not. Substantive scientific working papers and drafts are included—whether or not previously published—while such things as juvenilia, fragments, and data sheets are not. These guidelines are generously interpreted, so that one does not get any sense of undue truncation. The result is that this collection and *The Scientific Papers* together constitute a manageable, and yet quite complete and self-contained, redaction of Maxwell's extant scientific letters and papers.

Annotation of the texts runs from sparse to equaling the original text, as needed. These notes are very useful, reflecting Harman's broad knowledge of Maxwell's work and careful marshaling of relevant data. The content tends to be more bibliographic than explanatory or interpretive—citing, comparing, quoting, or summarizing relevant sources; interpretive strategies are of course evident in the choice of issues and materials. A well-conceived and substantial thirty-two-page introduction to Volume 1 provides a broader framework, in the form of a kind of road map and brief tour of the texts, emphasizing their interconnectedness and their relationship to the surrounding terrain. Here, again, the emphasis is on facilitating the reading of the texts, rather than imposing a point of view; Harman has written extensively on Maxwell, and he refers to those writings rather than repeating them. As Harman has suggested elsewhere (and I would certainly agree), the best is yet to come in Maxwell studies, and the intent here is to stimulate new growth rather than to present the final word. This edition will be an indispensable tool for all further research on Maxwell.

The book is handsomely produced, with excellent presentation of technical material such as diagrams and equations. Editorial mechanics are in general quite successful, while erring perhaps on the side of overterse-ness; document numbers in running heads would be helpful, page numbers in references to texts would be useful, some citations would be better repeated than cross-referenced, and so forth. The book is expensive, but it is also physically and intellectually substantial, so that it is a very worthwhile investment.

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